

IN THE CLAIMS:

Claim 1. (original) A fuel filter for removing sulfur-containing compounds from a liquid fuel, comprising:

    a hollow housing body defining a chamber therein; an inlet connected to the housing body and in fluid communication with the chamber thereof;

    an outlet connected to the housing body and in fluid communication with the chamber thereof; a filter media disposed in the housing chamber for filtering liquid fuel and for removing sulfur compounds therefrom; the filter media comprising:

        a plurality of fibers; and

        a sulfur-treating composition operatively associated with the fibers for reacting with sulfur-containing compounds.

Claim 2. (original) The fuel filter of claim 1, wherein the sulfur-treating composition is selected for its ability to react with thiophenes.

Claim 3. (original) The fuel filter of claim 1, wherein said filter media fibers comprise a plurality of shaped fibers having hollow channels formed therein.

Claim 4. (original) The fuel filter of claim 3, wherein said sulfur-treating composition comprises a sorbent material disposed within the hollow channels of the fibers.

Claim 5. (original) The fuel filter of claim 4, wherein said sorbent material is selected from the group consisting of activated carbon, zeolites, clay, silica gel, silicon dioxide, aluminum oxide and mixtures thereof.

Claim 6. (original) The fuel filter of claim 1, wherein the sulfur-treating composition comprises an electron acceptor, and wherein the sulfur-treating composition is adapted to form a coordination complex with a sulfur-containing compound.

Claim 7. (original) The fuel filter of claim 1, wherein the sulfur-treating composition comprises a reagent selected from the group consisting of metals, metal oxides, metallic salts, organometallic compounds, catalysts, and oxidizing agents.

Claim 8. (original) The fuel filter of claim 4, wherein the sulfur-treating composition further comprises a reagent selected from the group consisting of metals, metal oxides, metallic salts, organometallic compounds, catalysts, and oxidizing agents.

Claim 9. (original) The fuel filter of claim 1, wherein the sulfur-treating composition comprises a liquid emulsion.

Claim 10. (original) A fuel filter for removing sulfur-containing compounds from a liquid fuel, comprising: a thin-walled hollow housing body defining a chamber therein; an inlet connected to the housing body and in fluid communication with the chamber thereof; an outlet connected to the housing body and in fluid communication with the chamber thereof; a filter media disposed in the housing chamber for filtering liquid fuel and for removing sulfur-containing compounds therefrom; the filter media comprising: a plurality of substrate particles; and a reagent operatively associated with a plurality of particles selected from said substrate particles, said reagent being capable of reacting with thiophenes.

Claim 11. (original) The filter of claim 10, wherein said substrate particles comprise a substance selected from the group consisting of activated carbon, zeolites, clay, silica gel, silicon dioxide, aluminum oxide and mixtures thereof.

Claim 12. (original) The filter of claim 10, wherein said reagent is selected from the group consisting of metals, metal oxides, metallic salts, organometallic compounds, catalysts, and oxidizing agents.

Claim 13. (original) A system for reducing a concentration of sulfur-containing compounds in a liquid fuel, comprising: a metering pump for adding a precipitating agent to said fuel at a first location; and a filter for removing a precipitate from said fuel downstream of said metering pump, said filter comprising: a thin-walled hollow housing body defining a chamber therein; an inlet connected to the housing body and in fluid communication with the chamber thereof; an outlet connected to the housing body and in fluid communication with the chamber thereof; and a filter media disposed in the housing chamber for filtering precipitate from said liquid fuel and for thereby removing sulfur-containing compounds therefrom.

Claim 14. (original) A method of filtering fuel, comprising the steps of:

a) transferring the fuel from a reservoir through a fuel line and to a fuel filter;

b) treating the fuel by passing it through the fuel filter and over a filter media housed therein, said filter media comprising a reactant selected for its ability to react with thiophenes and reduce the concentration thereof in said fuel; whereby the concentration of sulfur-containing compounds in the fuel is reduced.

Claim 15. (original) The method of claim 14, wherein the filter media comprises a plurality of shaped fibers having hollow channels formed therein.

Claim 16. (original) The method of claim 15, wherein a plurality of solid particles are disposed within the hollow channels of the fibers.

Claim 17. (original) The method of claim 14, wherein said filter media comprises a plurality of substrate particles comprising a substance selected from the group consisting of activated carbon, zeolites, clay, silica gel, silicon dioxide, aluminum oxide and mixtures thereof.

Claim 18. (original) The method of claim 17, wherein said substrate particles are operatively associated with a substance selected from the group consisting of metals, metal oxides, metallic salts, organometallic compounds, catalysts, and oxidizing agents.

Claim 19. (original) The method of claim 18, wherein said filter media further comprises a reagent selected from the group consisting of metals, metal oxides, metallic salts, organometallic compounds, catalysts, and oxidizing agents.

Claim 20. (original) A method of reducing a concentration of sulfur-containing compounds from a liquid fuel, comprising:

adding a precipitating agent to said fuel at a first location between a fuel storage tank and a fuel application, whereby a sulfur-containing compound in said fuel is precipitated out of solution therein; and passing said fuel through a fuel filter to remove said precipitate from said fuel.

Please add new claims 21-26 as follows:

Claim 21. (new) A method of filtering fuel of a reservoir in fluid communication with a fuel filter, comprising:

transferring fuel from the reservoir to the fuel filter;

passing fuel through a filter media disposed within the fuel filter, said filter media comprising: a sulfur-treating composition operatively associated with said filter media and for reacting with sulfur-containing compounds, wherein the concentration of sulfur-containing compounds in the fuel is reduced by passing the fuel through said filter media.

Claim 22. (new) The method of claim 21, wherein the filter media comprises a plurality of shaped fibers having hollow channels formed therein.

Claim 23. (new) The method of claim 22, wherein a plurality of solid particles are disposed within the hollow channels of the fibers.

Claim 24. (new) The method of claim 21, wherein said filter media comprises a plurality of substrate particles comprising a substance selected from the group consisting of activated carbon, zeolites, clay, silica gel, silicon dioxide, aluminum oxide and mixtures thereof.

Claim 25. (new) The method of claim 24, wherein said substrate particles are operatively associated with a substance selected from the group consisting of metals, metal oxides, metallic salts, organometallic compounds, catalysts, and oxidizing agents.

Claim 26. (new) The method of claim 25, wherein said filter media further comprises a reagent selected from the group consisting of metals, metal oxides, metallic salts, organometallic compounds, catalysts, and oxidizing agents.